

# **REPORT ON THE HOSPITAL/AMBULATORY SURGICAL FACILITY PERFORMANCE EVALUATION SYSTEM**

## **EXECUTIVE SUMMARY**

The 1999 Maryland General Assembly charged the Maryland Health Care Commission<sup>1</sup> (MHCC or Commission) with developing and implementing a system to comparatively evaluate the quality of care outcomes and performance measurements of hospitals and ambulatory surgical facilities (ASFs) on an objective basis. The purpose of developing a comparable performance measurement system or "report card" is to improve the quality of care provided by hospitals and ASFs. The enabling legislation<sup>2</sup> states that this can be accomplished by establishing a common set of performance measurements and disseminating the findings of the performance measurements to hospitals, ASFs, consumers, and other interested parties.

As part of the enabling legislation, the MHCC was tasked to work on the design and development of the Hospital/ASF performance evaluation system in consultation with the Association of Maryland Hospital and Health Systems (MHA), the Maryland Ambulatory Surgical Association, and interested parties including consumers, payors, and employers. A Steering Committee comprised of representatives from the Office of Health Care Quality (Department of Health and Mental Hygiene), the Health Services Cost Review Commission, the hospital and ASF industry, academia and consumer members was subsequently created to assist the Commission.

The Hospital/ASF Report Card Steering Committee convened on a monthly basis beginning February 2000 and has reviewed and discussed the key issues affecting the presentation of performance evaluation data. The Steering Committee has agreed that the hospital/ASF performance evaluation system should address the following items related to design and content:

### Design

1. Information presented to the public should consist of three separate performance evaluation reports: (1) hospitals; (2) hospital obstetrical services; and (3) ASFs. Since a majority of hospital services are allocated to maternal care, the Steering Committee agreed that a report focusing on obstetrics would assist expectant mothers with their selection of hospitals. Further research will need to be conducted on preparing an obstetrics report.
2. The primary audience for the hospital, obstetrics, and ASF reports is the general public residing in Maryland and surrounding states. While many people do not have sufficient time to plan or decide where to receive services, in some instances certain medical care, such as elective surgery, may be pre-arranged. The performance evaluation report would be useful to consumers who have the ability to plan to receive medical care. In addition, expectant

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<sup>1</sup> The MHCC is a 13-member independent commission located administratively within the Department of Health and Mental Hygiene. The Commission is responsible for administering the provisions contained in Health General Article §19 sections 101 through 141. The Commission was created in 1999 by combining the Health Care Access and Cost Commission (HCACC) and the Maryland Health Resources Planning Commission (MHRPC).

<sup>2</sup> Chapter 657 of 1999 (House Bill 705)

mothers and their families may use the hospital report, as well as the obstetrical report, to plan their delivery. Individuals treated at ASFs, in most instances, have sufficient time to research and select an ASF.

3. The reports will be web-based with supplemental hard-copy brochures describing the reports and ways to obtain access. Consumers will access hospital and ASF specific information from the web site by facility name, medical condition or problem, geographic region, specialty, and through a search capability.
4. A consumer guide section also will be available on the website to supplement the performance report data. Included in the consumer guide will be a checklist and/or suggested questions that a consumer may ask to obtain additional information about a hospital or ASF.

### Content

5. The following structural, or descriptive, information is recommended to be included in the initial hospital report - tax status, Medicaid and/or Medicare participation, number of licensed beds, teaching status, system affiliation, and Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation and level of accreditation. In the consumer guide section of the report, consumers will be instructed to consult the facility for the most up to date information on commercial insurance that is accepted.

The number of total physicians and the ratio of board certified physicians to total number of physicians should be indicated. Since residents and fellows have not completed training and/or are ineligible to take the medical boards, they will not be included in this tabulation. Licensure and certification will include three subheadings: (1) Medicare certification; (2) state licensure (current or not current); and (3) other certifications.

6. High volume hospital procedures by frequency and length of stay should be reported in a manner similar to the Pennsylvania hospital report card. The Steering Committee felt Pennsylvania's classification and presentation of high volume Diagnosis Related Groups (DRGs) was comprehensible and informative. MHCC staff will compare the high volume Maryland DRGs to the Pennsylvania DRGs for any overlap and research additional DRGs to be included. The volume and length of stay per DRG will be indicated for each hospital. A list of questions consumers should ask about charges will be included in the consumer guide.
7. The performance evaluation system must consist of valid and reliable indicators. Those structure and process measures selected by the Steering Committee will have been thoroughly researched and tested before being presented to the public. The outcomes measures that require adjustment for patient acuity will be risk-adjusted prior to being presented. The Commission may utilize data that are already being collected for other purposes (e.g., by the MHA or the Health Care Financing Administration [HCFA]). In those cases, the Steering Committee believes that the Commission should collect the data in the same manner. Any additional administrative burden on Maryland hospitals and ASFs should be minimized. However, the data collected by the Commission for this performance evaluation system may be utilized or presented in a fashion that is not the same as other data-collecting entities.

8. The HCFA 6<sup>th</sup> Scope of Work (SOW) quality indicators for the Medicare population only should be included in the initial hospital report. These measures are process indicators; and therefore, do not require risk-adjustment.
9. Some measures from the MHA's Quality Indicator (QI) project should be included in the initial hospital report. Others should be pilot tested for future public reporting. Measures for immediate reporting include Device Associated Infections in Intensive Care Units and Prophylaxis for appendectomies and hysterectomies. Measures related to unscheduled readmissions and unscheduled returns will be pilot tested before being reported to the public. Complication and infection measures will be studied for inclusion in the report, while measures related to restraints and falls will require risk-adjustment and may be included in a future report.
10. The ASF report should include information on each ASF's tax status, facility type, owner name, direct or indirect ownership interest, and whether the ASF participates in Medicaid and/or Medicare. Information on hospital affiliation, board-certified anesthesiologist/certified registered nurse anesthetist on-staff will also be presented (this information is not currently collected). The Steering Committee recommends three measures be studied for inclusion in future reports. They are: post-operative infection rate; sedation complications; and rate of transfer to an acute care facility. The MHCC does not currently collect data related to these measures.

In the consumer guide section of the ASF report, consumers will be encouraged to consult with ASFs to obtain the most up-to-date information on what commercial insurance is accepted. Consumers will also be encouraged to ask practitioners about the number of times they have performed a particular procedure since individual practitioners may actually practice at several ASFs.

11. The Steering Committee came to a consensus that patient satisfaction information should not be incorporated in the initial Hospital/ASF performance evaluation. Since hospitals and ASFs do not use a common survey instrument, the Steering Committee concluded more information is needed in this area. Moreover, surveys currently used by hospitals may be designed to address a particular hospital's internal needs rather than for public reporting.
12. The Hospital/ASF Report Card Steering Committee should continue to meet periodically to monitor the progress of report development and consider new measures that have been validated including tools to assess patient satisfaction.

## **I. Introduction**

The 1999 Maryland General Assembly charged the Maryland Health Care Commission<sup>3</sup> (MHCC or Commission) with developing and implementing a system to comparatively evaluate the quality of care outcomes and performance measurements of hospitals and ambulatory surgical facilities (ASFs) on an objective basis. The purpose of developing a comparable performance measurement system or "report card" is to improve the quality of care provided by hospitals and ASFs. The enabling legislation<sup>4</sup> states that this can be accomplished by establishing a common set of performance measurements and disseminating the findings of the performance measurements to hospitals, ASFs, consumers, and other interested parties.

In developing these performance reports, the Commission is required to consider the geographic location, urban or rural orientation, and teaching or non-teaching status of the hospital and the ASF, and the health status of the population served. The law also states that performance information shall be solicited from consumers; the Commission has interpreted this to mean patient satisfaction. The hospital and ASF data are to be published annually (see Appendix A for enabling legislation).

At this time, a comprehensive report or guide describing the performance of Maryland hospitals and ASFs does not exist. Information on hospitals and ASFs is usually communicated in an anecdotal and piecemeal fashion: an individual may learn about the performance of a specific hospital or ASF through a friend, family member or personal physician. In addition, both favorable and negative information about facilities are often presented by the media. The performance evaluation tool or "report card" to be developed by the MHCC should be used by consumers to assist in the selection of hospitals and ASFs. It is anticipated that a well-designed evaluation system could promote improvements in quality of care.

The purpose of this report is to provide information to the General Assembly on the status of the proposed Hospital/ASF performance evaluation system. The performance system is required to be implemented by July 1, 2001.

## **II. Hospital/ASF Report Card Steering Committee**

As part of the enabling legislation, the MHCC was tasked to work on the design and development of the Hospital/ASF performance evaluation system in consultation with the Association of Maryland Hospital and Health Systems (MHA), the Maryland Ambulatory Surgical Association, and interested parties including consumers, payors, and employers. A Steering Committee comprised of representatives from the Office of Health Care Quality (OHCQ - Department of Health and Mental Hygiene [DHMH]), the Health Services Cost Review Commission (HSCRC), the hospital and ASF industry, academia and consumer

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<sup>4</sup> Chapter 657 of 1999 (House Bill 705)

members was subsequently created to assist the Commission. A list of current members is presented in Appendix B.

The Hospital/ASF Report Card Steering Committee convened on a monthly basis beginning February 2000 and has met nine times. A briefing book with selected information regarding hospital and ASF quality-of-care reports was presented to the Steering Committee members at their first meeting. The binders contained industry accreditation information, copies of report cards issued by various states, and selected academic articles.

The Steering Committee has reviewed and analyzed the following areas and issues relevant to the design and development of the hospital/ASF performance evaluation system –

- Existing state hospital and ASF “report cards” and consumer guides
- Current quality control and data collection efforts in Maryland hospitals and ASFs
- Current quality initiatives presented by regional and national organizations

The following are selected accounts of the Steering Committee meetings beginning in February 2000 through November 2000.

#### February 2000

The Steering Committee met for the first time on February 28<sup>th</sup> for its organizational meeting. Staff had prepared a briefing book that included an overview of hospital and ASF-related data that are currently being collected in Maryland and some background material related to hospital and ASF performance reporting in general. In addition, the staff collected materials from other states' hospital/ASF performance reports currently being published.

#### March 2000

In March, Mr. David Mangler, Managing Director of the Quality Indicator (QI) Project, MHA, presented information about the QI Project. According to Mr. Mangler, the Project's mission is to develop valid indicators that are useful in participants' (health care facilities) efforts to understand and improve their performance. Hospitals are currently utilizing the data yielded by the QI measures for internal quality improvement. Mr. Mangler gave a brief history of the development of the QI Project and the logistics of how hospitals can participate. He then presented an overview of the four Indicator Sets (Acute Care; Long-term Care; Psychiatric Care; and Home Care) and the measures contained in each of those sets. The Acute Care Indicators (both inpatient care and ambulatory care) measures were explained in detail. Mr. Mangler concluded the presentation by stating that the purpose of the QI Project is to encourage facilities to focus on using the outcome data to help identify opportunities to improve the processes of care.

#### May 2000

In May, Ms. Carol Benner, Director of the OHCQ, presented information on hospital and ASF regulation. According to Maryland State law, hospitals are deemed to meet basic State licensure requirements if they are accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). If a hospital is not accredited by JCAHO, it must meet JCAHO standards for licensure. State authority over "deemed hospitals" is limited to utilization review,

physician credentialing, risk management, regulation of organ and tissue donation, assuring rights of individuals with mental illness, and complaint investigations. A hospital that fails to satisfy the requirements faces revocation of license, and/or fines for failure to meet utilization review, credentialing, and risk management licensure requirements.

Under federal law, hospitals are deemed to meet basic federal certification requirements if they are JCAHO accredited. Federal authority is limited to complaint investigations (through the Medicare Conditions of Participation) and validation surveys. If sanctioned, the hospital may face removal of deemed status and termination from the Medicare program. If a hospital's deemed status is terminated, the State will assume control the hospital. All reports are public information.

A second presentation was given by Dr. Patricia Rowell, a Senior Policy Analyst at the American Nurses Association. Dr. Rowell spoke about the ANA's Nursing-Sensitive Quality Indicator project. The ANA recommends an indicator that is sensitive to the input of nursing care. Indicator selection criteria developed by the ANA are: specific to nursing; able to be tracked; and widely regarded as having a strong link to nursing quality. The indicators are patient-focused outcomes, process of care, and structure of care. Structural measures include a mix of registered nurses, licensed practical nurses, and unlicensed staff and total nursing care hours provided per patient day. The process of care indicators may focus on skin integrity and nurse staff satisfaction. Outcome indicators include nosocomial infection rate, pain management, patient education, patient injury rate and patient satisfaction as it relates to nursing care. The State Nurses Association outcomes project is currently being pilot tested in Arizona, Ohio, Minnesota, North Dakota, Texas, and Virginia.

#### June 2000

Mr. Joe Martin, Director of Communications and Education at the Pennsylvania Health Care Cost Containment Council (PHC4), briefed the Steering Committee on the Pennsylvania Hospital Report Card and Ambulatory Surgery Report. Mr. Martin spoke about the organization and mission of the PHC4 and the goals of public reporting. The Pennsylvania hospital report card was created by PHC4 using data from the UB 92 (billing form) on two million inpatient hospital discharges, payor data, selected outpatient/ambulatory surgery data (1.5 million records), hospital financial and utilization information, and admission severity and outcome data. Outcome data are severity-adjusted according to the Atlas Outcomes Admission Severity Group.<sup>5</sup> These data are adjusted for age, gender, and risk factors and are statistically validated. Reports are generated by the PHC4 for the public (i.e., heart bypass surgery, ambulatory surgery, and cesarean section deliveries) and through customized data analysis for special reports. The hospital performance report is separated into three geographical regions - Western Pennsylvania, Central and Northeastern Pennsylvania, and Southeastern Pennsylvania. Each report covers inpatient hospital discharges and features number of cases, risk-adjusted mortality rating, risk-adjusted length-of-stay, and average charge. A Steering Committee member pointed out that the Maryland hospital database maintained by the HSCRC is not specifically risk adjusted, although complications are taken into account.

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<sup>5</sup> MediQual Systems, Inc.(acquired by Cardinal Health Information Companies) developed ATLAS as a patient risk classification system. ATLAS abstracts patient severity scores from medical records, assigns patients to an appropriate illness category and submits data to PHC4.

Comparative hospital specific data are presented for fifteen procedures or Diagnosis Related Groups (DRGs)<sup>6</sup> representing approximately 15% of all hospital discharges statewide. The DRGs were selected according to a combination of factors, including a high degree of variation in mortality, high volume, significant resource consumption, and diversity across diagnoses and procedures. For each hospital and procedure, the number of cases, risk-adjusted mortality and length of stay and average charge are presented in the chart. The total number of cases, average risk-adjusted length of stay and average charge by region and state are also presented as a comparison. The reports are distributed to business and trade organizations including health care purchasing coalitions, libraries, legislators, and state agencies.

The Ambulatory Surgery Report was distributed in 1996 and contains information on procedures performed on patients in Pennsylvania hospitals, short stay units and freestanding ambulatory surgery facilities in 1996. The report compares ambulatory surgical data to the same inpatient hospital procedures and treatment. The PHC4 does not plan to release another ASF report. The PHC4 is funded through the Pennsylvania State budget and from revenue received through the sale of its data to health care stakeholders.

### July 2000

In July, representatives from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the Accreditation Association for Ambulatory Health Care (AAAHC) spoke about their respective organization's accreditation process for hospitals and ASFs.

Mr. Mark Crafton, Director of State Relations for JCAHO, spoke about the current and future JCAHO performance measurement requirements under the ORYX<sup>TM</sup> initiative. This initiative, introduced in February 1997, integrates outcomes and other performance measurement data into the accreditation process. Hospitals are currently required to collect and submit data on six clinical measures to an accepted system. Two hundred and twenty performance measurement systems are currently available for hospitals to use. Once a system has received a hospital's data, the system then transmits the data along with an aggregate comparison to JCAHO.

JCAHO uses the performance measurement data to encourage hospitals to improve quality of care. The JCAHO surveyors discuss with hospital representatives the rationale for each measure selected. Accreditation decisions are based on the ability of a hospital to demonstrate integration of data into performance improvement activities to maintain compliance with standards.

In the near future, hospitals will be required to report data on five focus areas. They are as follows: (1) acute myocardial infarction (coronary artery disease); (2) heart failure; (3) community acquired pneumonia; (4) pregnancy and related conditions (maternal/newborn); and (5) surgical procedures and complications. Within the five focus areas are forty-eight core measures. Specifications are currently being developed on twenty-five of the measures. Nineteen of the forty-eight measures are taken from the Health Care Financing Administration's (HCFA's) 6<sup>th</sup> Scope of Work initiative (see "October 2000" for more information on the HCFA project).

Mr. Crafton informed the group that the measure specification will be finalized and disseminated in years 2000 and 2001. During this time, pilot testing of the core measures will be held in five

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<sup>6</sup> A DRG is one of 495 classifications used for reporting medical services and procedures. Payment is based on the average Medicare patient's resource needs for a given set of diseases or disorders.

states (Connecticut, Georgia, Michigan, Missouri, and Rhode Island). The core measures will be integrated into the accreditation requirements beginning in 2002.

John Burke, PhD, Executive Director of AAAHC, and Sheryl Walker, MD, an anesthesiologist with The SurgiCenter of Baltimore and a Surveyor for AAAHC, spoke about the AAAHC accreditation process. The AAAHC is a private, independent, not for profit organization established in 1979. In addition to accrediting ASFs, the AAAHC also certifies health maintenance organizations, endoscopy centers, radiation oncology centers, and occupational health centers, among others. Currently, seventy-one Maryland organizations are accredited by the AAAHC.

Facilities requesting accreditation are required to follow eight core standards and sixteen adjunct standards. They relate to such areas as quality of care and quality management and improvement, clinical records, pharmaceutical services, facilities and environment, governance, administration, and professional development.

Dr. Walker spoke about her experience as a surveyor for AAAHC. She explained that an ambulatory health care facility would initially file an application with the AAAHC for accreditation review followed by a self-assessment using AAAHC guidelines and standards. An on-site survey is then conducted by an AAAHC survey team experienced in both the clinical and administrative aspects of ambulatory health care.

Following the survey, the team makes a recommendation for accreditation. This recommendation is then reviewed by AAAHC's Accreditation Committee, who make the final decision. Accreditation may be awarded for six months, one year, or three years. The accreditation decision could be deferred or denied as well.

#### August 2000

The Steering Committee did not meet in August. During this time, the staff prepared sample or "mock-up" hospital and ASF reports. The reports were prepared assuming that the information would be presented in a web-based format. Discussion of the sample reports was held at the September meetings.

#### September 2000

At the September 5<sup>th</sup> meeting, the staff presented a chart describing several states' hospital report cards and examples of information presented in these reports (see Appendix C). Some reports are specific to a particular surgery (such as New Jersey), patient satisfaction (Massachusetts), and types of procedures. In addition, some reports indicate the risk adjusted length-of-stay and mortality rates while others offer general descriptive information.

In addition, sample or "mock-up" reports of the hospital and ASF reports were prepared by the staff and presented to the Steering Committee. The reports were prepared assuming a web-based format. In the ASF example, a consumer would select the county of interest, then the specialty. Once these two fields are selected, a list of facilities is presented on the screen. The single-specialty, multi-specialty and hospital-based facilities are listed by name.

Similar to the ASF example, the mock-up inpatient facility report was designed to enable the user to initially select a county followed by a facility (specialties are not listed). Once a hospital is chosen, information on only that hospital is presented on the screen.

During this meeting, a discussion ensued as to the medium used to transmit the information. The Commission's staff recommended using web-based technology to present the hospital and ASF performance evaluation information. A web-based report could be supplemented with a paper document, such as a brochure, that would provide an overview of the reports, how to gain access to the web-product, and/or a toll-free number to gain access to the product. Also, ASF and hospital information may be easier to update and produce in the web-format as compared to a paper document.

During the September 28<sup>th</sup> meeting, the staff presented a revised version of the ASF mock-up report. The MHCC currently collects the information presented in the "report" through the annual Maryland Freestanding ASF Survey. Each facility's top 30 procedures performed and volume per procedure is collected. The Steering Committee was informed that, for each facility, the highest volume procedures may be listed or a common set of procedures by specialty may be listed (e.g., the top 5 podiatric procedures performed in Maryland ASFs would be listed for all ASFs that offer podiatric services). If each facility's procedures are listed, the top two or three procedures may be similar across all ASFs. If a core set of procedures were presented for all facilities that provide a certain service, however, a certain level of detail on a particular facility would be lost.

Also during the meeting, staff presented the fifteen most commonly performed DRGs in Maryland hospitals (1999) and an analysis conforming Maryland data to the fifteen DRGs listed in Pennsylvania's hospital report card. The total number of cases statewide and average charge by DRG were listed. In Pennsylvania, perinatal DRGs are not listed whereas in Maryland, six of the fifteen most common procedures are perinatal. A suggestion was made that the Steering Committee consider developing a separate list or report focusing on obstetrical procedures.

The staff also presented information on the MHA Quality Indicator (QI) Project. Currently, hospitals may choose the QI measures they want to report. Staff presented information on the measures by frequency of reporting. For example, 40 hospitals are reporting the inpatient mortality measure; this is the most reported measure. A second list showed the percentage of hospitals reporting each measure. For any given quarter, there are no measures that are reported by over 80% of Maryland hospitals. Seven measures are reported by 61%-80% of hospitals. The list provided the Steering Committee with an overview of the extent to which comparable information is currently being collected by the QI Project.

Ms. Beverly Miller of the MHA and Ms. Nell Wood, Director of Marketing and Communications of the MHA QI Project, presented an overview of the MHA QI Project and its relationship to other quality measure collection projects. Ms. Miller began by reviewing the MHA QI Project, the JCAHO core measures, and the HCFA Peer Review Organization (PRO) 6<sup>th</sup> Scope of Work (SOW) project (see Appendix D).

The JCAHO core measure initiative proposes 48 measures organized into five clinical areas: Acute Myocardial Infarction, Heart Failure, Pneumonia (Community Acquired), Pregnancy and Related Conditions, and Surgical Procedures and Complications. Twenty-five of the draft core

measures have specifications currently being developed. The core measures apply to the entire hospital population.

In addition, the HCFA also administers a QI program through its PRO contractors (e.g., Delmarva Foundation) titled "The Health Care Quality Improvement Program." The 24 HCFA 6<sup>th</sup> SOW indicators fall into 6 clinical areas: Acute Myocardial Infarction, Congestive Heart Failure, Atrial Fibrillation/Stroke, Breast Cancer, Diabetes, and Pneumonia. HCFA's 6<sup>th</sup> SOW project only collects data for Medicare beneficiaries. Nineteen of the 48 proposed JCAHO core measures are also HCFA's 6<sup>th</sup> SOW measures.

The MHA QI Project offers over 175 inpatient measures through its program (21 acute care indicators [groups of measures] of which 16 are inpatient indicators and 5 are ambulatory indicators). Currently, the MHA QI Project is an accepted performance measurement system for the Joint Commission's ORYX initiative. Sixty-two of the measures developed by the MHA for acute care were accepted by JCAHO for use in the ORYX requirement.

Ms. Wood noted that 1,100 acute care hospitals participate in the MHA's QI Project. Some participants are outside of the United States. Hospitals choose from a list of rates which measures are important to their particular facility.

The MHA collects facility level data from the participating hospitals (only hospitals collect patient level data). The MHA uses stratification as the means for risk-adjusting many of the measures, but not all of the measures are risk-adjusted. Future JCAHO standards may require risk adjusted patient-level data.

The MHA is developing a patient level data collection and comparative analysis program titled *QI Map*. The program will be web-enabled and will facilitate drill-down analysis at the facility level. The program will be compliant with the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The first release of *QI Map* will include a series of current QI Project measures translated into patient-level measures. The program's architecture will be flexible so that core measures can be embedded at a future date. It will be pilot tested in early 2001.

Discussion among Steering Committee members centered on the possibility of including some MHA indicators in the hospital report. Currently, there are measures that do not require risk-adjustment that are reliable and valid, and may be able to be included in the report. The Steering Committee agreed that they should first come to a consensus on those indicators that are currently being collected from the hospitals. The Commission would assist hospitals with data collection efforts before the measures are presented in the report.

#### October 2000

During the October 18<sup>th</sup> meeting, the Steering Committee continued discussing what information to include in an ASF (outpatient) report card. As mentioned at the previous meeting, the MHCC conducts an annual Maryland Freestanding ASF Survey that collects each facility's top 30 procedures performed and volume per procedure. Staff presented a list of the top 15 procedures performed in Maryland ASFs in 1999. These procedures would need to be translated into "layman's" terminology to be useful to a consumer.

An issue facing the Steering Committee is whether to list each facility's top five procedures or present a common set of procedures by specialty for each facility performing that particular specialty (e.g., the top 5 podiatric procedures performed in Maryland ASFs would be listed for all ASFs that offer podiatric services). If each facility's procedures are listed, the top two or three procedures may be similar across all ASFs. If a core set of procedures were presented for all facilities that provide a certain service, however, a certain level of detail would be lost.

Also during this meeting, Donald Casey, Jr., MD, MPH, MBA, FACP from the Delmarva Foundation and Mr. Thomas Schaefer, CEO of the Delmarva Foundation, presented information on the HCFA Health Care Quality Improvement Program (HCQIP). The HCFA and its contractors, Peer Review Organizations (e.g., Delmarva Foundation), initiated the HCQIP. The program was launched in 1992 with a focus on improving the health of Medicare beneficiaries. The following six clinical priority areas encompass the HCQIP –

- Acute myocardial infarction
- Breast cancer
- Diabetes
- Heart Failure
- Pneumonia
- Stroke

Twenty-four process-of-care measures were adopted or developed relating to primary prevention, secondary prevention, or treatment of the six clinical areas (also known as HCFA's 6<sup>th</sup> Scope of Work [SOW] measures).

The Steering Committee agreed that the Hospital/ASF report card should initially list process measures that are valid and reliable. At that time, the following measures were agreed upon: (1) beta-blockers; (2) immunizations for pneumonia; (3) anticoagulants; and (4) antibiotics. Some members of the Steering Committee indicated that additional measures might be included. Dr. Casey recommended that the Steering Committee should consider process measures that have a potential for improving patient care.

#### November 2000

The Steering Committee continued its decision-making discussions at the November 2<sup>nd</sup> meeting. The Steering Committee agreed that the reports should be web-based with supplemental paper brochures describing the reports and how to obtain them. Also, consumers should access hospital and facility specific information from the web site by multiple means including facility name, problem or medical condition, geographic region, specialty, and through a search capability. The Steering Committee felt that three separate reports (hospital, obstetrics, and ASFs) would be useful to consumers; however, further research will need to be conducted to prepare recommendations on an obstetrics report. An "options worksheet" listing the various design elements was presented by the staff. The Steering Committee was asked to select those measures for both hospitals and ASFs that could be presented in the initial report (July 2001), future reports, or, alternatively, should not be reported. (See "Conclusions" for further information.)

### III. Policy Issues

The design and development of the hospital/ASF performance evaluation system requires a comprehensive review of existing data sets and quality initiatives, samples of current reports, and knowledge of issues raised by interested parties. In addition, the Commission and the Steering Committee are concerned about policy issues affecting the development of the hospital and ASF performance evaluation system. These issues are classified into two separate categories – the data or “content” and the design or “form.”

The “content” of the evaluation system comprises issues related to performance measurement. These data issues include the selection of data elements, the reliability and validity of those data elements, timeliness, risk adjustment, and patient satisfaction assessment.

The “form” of the performance evaluation system encompasses issues related to the design of the system. Issues related to design focus on questions such as:

- Which facilities should be included in the performance evaluation system (i.e., all single specialty ASFs or only those doing high volume procedures)?
- How should the report be presented to the public (i.e., web-based or hard copy)?
- Who is the audience for performance reporting information?

The following section of this report will initially address the issues related to data and then to the design of the evaluation system.

#### A. Data Issues

##### Selection of Quality Measures and Risk Adjustment

Thorough research and analysis are needed when selecting quality measures for a public reporting system. The information ultimately presented to the consumer must be clear, concise, and easily understandable. The Steering Committee comprehensively reviewed and discussed various data elements and their sources before recommending information that should be publicly reported to the Maryland consumer.

Tools used to measure quality of care delivered by a health care facility are classified in four categories: (1) the *structure* of care reflecting the resources to deliver care (e.g., staff, equipment, facilities); (2) the *processes* of care which are the activities carried out to deliver the care; (3) *outcomes* of care which can be either desirable events (e.g., rates of immunization) or undesirable events (e.g., infection rates, mortality rates); and (4) *patient satisfaction* with care.

Indicators that measure the structure of care are indirect measures of health care quality. They are proxies for quality, which tell more about the care a patient *might* receive than the care the patient *actually* receives. For example, using the number of board-certified emergency room physicians in a hospital as a quality measure has an underlying assumption that board-certified physicians provide higher quality care. This assumption may not be true in every specific instance but, if numerous studies support a correlation between the indicator and high quality care, then the general assumption can be asserted.

The most direct measures of quality are indicators based on processes of care and outcomes. The utilization of outcomes-based indicators, however, must account for differences in patient characteristics. In order to make valid comparisons of information from different hospitals, the data must be risk-adjusted. A statistical model must take into account patient-specific variables that are beyond the control of the hospitals. These variables could include the age of the patient, the severity of the illness, other complications, as well as a number of demographic factors. Risk-adjustment allows for fair comparisons of the same diagnosis across all of the hospitals because it takes into consideration pre-existing factors that could alter the outcome of care. A number of risk-adjustment models exist today; however, there is no agreement as to which one is the best. Another difficulty with risk-adjustment is that it is impossible to account for every single risk factor that may influence a particular outcome.

Quality indicators (QIs) are indicative of performance. The presentation of QIs can assist potential users of a hospital or ASF (i.e., patients) in selecting a facility. Also, QIs encourage providers and facilities to compare their performance with the best-established practices.

### Reliability and Validity

A performance evaluation system or “report card” that consists of valid and reliable data is essential to its ultimate acceptance by the public. Structure and process measures are currently the most prevalent and easiest to measure; however, if using these measures as surrogates for quality, the literature must support the use of those measures. While outcomes measures are most directly related to quality of care, they may require risk adjustment. Risk adjustment entails the use of detailed medical and demographic information that is contained in a patient's medical record. The time, expense, and interpretive difficulties in collecting this information makes outcome measure reporting more problematic.

### Independent Verification

Most of the descriptive, or structure, data are collected by the HSCRC and the MHCC. Data on each Maryland hospital and ASF are self-reported on an annual basis. This information may be further validated by requesting each facility to confirm the data submitted to the State.

Process measures (i.e., the activities carried out to deliver the care) are collected by the HCFA as part of their Health Care Quality Improvement Program (HCQIP). These measures do not require risk adjustment and may be self-reported by hospitals.

Outcome data are not currently collected in Maryland for public reporting. Data available from the HSCRC are not risk adjusted. However, procedural data indicating whether complications were present can be collected.

The Steering Committee discussed whether the data submitted to the MHCC should be independently audited for accuracy. The Steering Committee concluded that at least initially, the only verification required should be that each hospital has a system in place to capture data elements. For ASFs, random verification could be requested for the numbers of procedures performed.

## Timeliness

The Steering Committee, along with the MHCC, is committed to providing the consumer with accurate and up-to-date information. Many of the data elements that will be presented in the hospital and ASF performance evaluation systems are subject to change; therefore, it is imperative to maintain a method of dissemination that enables the MHCC to update the data on an ongoing basis. The medium selected should allow the MHCC to frequently access the data and make any updates deemed necessary.

## Data Sources

Numerous studies identify ongoing issues with the validity of data sources. Most administrative health care databases were designed for financial purposes and not clinical purposes. However, they currently are widely used for quality assessment because of the low cost of data collection and universal availability. Clinical data, mostly found in medical records, are more accurate and comprehensive. Obtaining that information, however, is costly as trained personnel must be utilized to abstract it from the records. Patient satisfaction surveys are another source of data; however, they are also costly to administer.

## Patient Satisfaction

Consumer, or patient, satisfaction is a critical component of measuring the quality of care a facility delivers. Oftentimes, a patient views quality of care as the opinion of the type of treatment he or she received in a health care facility. For example, did the health care professionals respect the patient's preferences and expressed needs? Was the patient provided with information on each procedure? Did the health care professionals provide emotional support and attempt to alleviate the patient's fears?

Most Maryland hospitals and ASFs mail a patient satisfaction form to patients who received care at their facility. Surveys such as those designed by the Picker Institute, Press Ganey Associates and Professional Research Consultants offer patient satisfaction instruments that are widely used by Maryland health care facilities and organizations across the country.

Currently, hospitals and ASFs do not use a common patient satisfaction instrument nor do they follow a common complaint management protocol. Reporting patient satisfaction data in the performance evaluation system would require that hospitals and ASFs use a standard patient satisfaction instrument.

## **B. Design Issues**

### Choice of Facilities to Include/Exclude

All acute care hospitals (48 Maryland hospitals) will be included in the performance evaluation report. For ASFs, however, the issue of which facilities to include in the report is more complex. There are 172 single specialty ASFs in Maryland.<sup>7</sup> Issues for consideration include whether single specialty facilities with only one location or low volume should be included. For example, only one single-practice dermatology facility currently operates in Maryland and two

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<sup>7</sup> Maryland Ambulatory Surgery Provider Directory, Maryland Health Care Commission, May 2000.

otolaryngology ASFs are in operation. A valid comparison of performance measures between such a small number of facilities with similar practicing specialties would be difficult; only descriptive information could be presented.

One purpose of the report cards is to improve the quality of care of hospitals and ASFs. Therefore, not listing the performance measures of certain single specialty ASFs with few facilities (such as dermatology) may not provide a comprehensive assessment of all ASFs within Maryland. In addition, some multi-specialty facilities contain certain practices that could be compared to single specialty facilities. For example, outcomes from the single specialty dermatology facility could be compared against the dermatology practice of a multi-specialty facility.

Another issue to consider is whether to institute a volume threshold. The number of cases reported by ASFs to the MHCC in 1998 ranged from zero to 30,332. As previously mentioned, not including the performance measures from certain facilities would fail to provide a comprehensive assessment of all ASFs within Maryland. However, performance measurement data from facilities with small numbers of cases will be subject to issues related to small sample size and confidentiality.

#### Presentation and Stratification of the Report

The report must be easily understandable and arranged in a logical manner so that the consumer may be able to locate information about a particular facility with minimal difficulty. An issue faced by the Steering Committee is how to present the data. Hospitals and hospital-based multispecialty ASFs are rate regulated, whereas freestanding single and multispecialty ASFs are compensated through direct contracts with insurers or patients. Presenting the rate-regulated hospital-based ASFs separately from the freestanding non-rate-regulated ASFs may be confusing to the consumer. An alternative approach is to present one report card with hospital inpatient data and a separate report card of all ASFs. The ASF guide would include hospital-based ASFs as well as the freestanding facilities. The Steering Committee favored this approach although the two report cards may include similar information in some areas.

#### Dissemination (Web-based/Hard-Copy)

How information is presented to the public is important. Web-based technology has enabled many hospitals and ASFs to post information about their specific facility. The Internet has enabled people and organizations to advertise a product to a large number of consumers at a small cost.

A web-based report has many advantages compared to a hard copy version. The cost to publish the data on the Internet is less than print. Also, the information presented on each facility can be more easily updated. Instead of publishing an annual report, the web will allow the MHCC to update data on a more frequent basis. Moreover, a web-based version will allow consumers to “drill down” so that greater levels of detail can be obtained if the consumer wants specific information.

Hard copies of the performance report may reach a greater number of people. Many Maryland residents currently do not have access to Internet services. Therefore, an alternative may be to distribute a small number of hard copy reports in addition to a general descriptive brochure or to

publish a toll free number to the Commission and have the staff download the performance report and mail it to consumers who request it.

The MHCC HMO “report cards” are currently presented in both hard copy and on the Internet, ensuring that the consumer has multiple means of obtaining the information. These HMO reports are currently only updated on an annual basis.

### Audience

When designing a guide, the needs of the audience must be taken into consideration. Consumers may want different information than employers. Health plans, as contractors of hospital services, may be interested in more detailed aspects of a hospital, whereas the average consumer may be more at ease with general information clearly presented. A hospital may want to use the performance evaluation system to help change practice patterns through quality evaluation and improvement or as a competitive marketing tool to show how its services compare with others.

For example, the HMO Guides, distributed by the MHCC, are designed and distributed to a variety of audiences with varied interests and needs for information on the quality of care HMOs provide. The documents range from consumer friendly guides that are easy to understand to complex statistical reports. The following list provides examples of the HMO reports –

- *The Guide for Consumers* is available to those individuals who are contemplating choosing a health plan and employers who are selecting an HMO to offer to their employees.
- *The Guide for State Employees* is a subset of the larger report for consumers designed for the 100,000 State of Maryland employees who are eligible to receive health benefits from the State.
- An interactive or web-based version of the report is presented on the MHCC web page. Visitors to the web-based document may choose HMOs that are of interest to them and include the performance information for only those plans in a customized report.
- A *Comprehensive Report* was designed for health plans, professional benefit managers, and others who want all the details on how each commercial HMO compares to the others on member ratings and clinical performance (as defined by HEDIS measures). This report is a more complete and statistically detailed, less graphic, compendium of the information that forms the basis of the guide for consumers.
- For legislators and policy-makers who want the "big picture" on the strengths and weaknesses of Maryland commercial HMOs, a *Policy Report* is available. The report compares Maryland's commercial HMOs, as a group, to commercial HMOs in the mid-Atlantic region and to HMOs nationally.

## IV. Conclusion

The Hospital/ASF Report Card Steering Committee has reviewed and discussed the key issues outlined above affecting the presentation of performance evaluation data. Table I below outlines sets of measures to be included in future hospital reports and the expected date of reporting. A mock-up of sample hospital and ASF reports are included in Appendices E and F. Methods of assessment for hospitals are currently more sophisticated than for ASFs and therefore the hospital report will contain more quality measures. The Steering Committee has agreed that the hospital/ASF performance evaluation system should address the following items related to design and content:

### Design

1. Information presented to the public should consist of three separate performance evaluation reports: (1) hospitals; (2) hospital obstetrical services; and (3) ASFs. Since a majority of hospital services are allocated to maternal care, the Steering Committee agreed that a report focusing on obstetrics would assist expectant mothers with their selection of hospitals. Further research will need to be conducted on preparing an obstetrics report.
2. The primary audience for the hospital, obstetrics and ASF reports is the general public residing in Maryland and surrounding states. While many people do not have sufficient time to plan or decide where to receive services, in some instances certain medical care, such as elective surgery, may be pre-arranged. The performance evaluation report would be useful to consumers who have the ability to plan to receive medical care. In addition, expectant mothers and their families may use the hospital report, as well as the obstetrical report, to plan their delivery. Individuals treated at ASFs, in most instances, have sufficient time to research and select an ASF.
3. The reports will be web-based with supplemental hard-copy brochures describing the reports and ways to obtain access. Consumers will access hospital and ambulatory surgical facility specific information from the web site by facility name, medical condition or problem, geographic region, specialty, and through a search capability.
4. A consumer guide section also will be available on the website to supplement the performance report data. Included in the consumer guide will be a checklist and/or suggested questions that a consumer may ask to obtain additional information about a hospital or ASF.

### Content

5. The following structural, or descriptive, information is recommended to be included in the initial hospital report - tax status, Medicaid and/or Medicare participation, number of licensed beds, teaching status, system affiliation, and JCAHO accreditation and level of accreditation. In the consumer guide section of the report, consumers will be instructed to consult the facility for the most up to date information on commercial insurance that is accepted.

The number of total physicians and the ratio of board certified physicians to total number of physicians should be indicated. Since residents and fellows have not completed training and/or are ineligible to take the medical boards, they will not be included in this calculation. Licensure and certification will include three subheadings: (1) Medicare certification; (2) state licensure (current or not current); and (3) other certifications.

6. High volume hospital procedures by frequency and length of stay should be reported in a manner similar to the Pennsylvania hospital report card. The Steering Committee felt Pennsylvania's classification and presentation of high volume DRGs was comprehensible and informative. MHCC staff will compare the high volume Maryland DRGs to the Pennsylvania DRGs for any overlap and research additional DRGs to be included (see Appendix G). The volume and length of stay per DRG will be indicated for each hospital. A list of questions consumers should ask about charges will be included in the consumer guide.
7. The performance evaluation system must consist of valid and reliable indicators. Those structure and process measures selected by the Steering Committee will have been thoroughly researched and tested before being presented to the public. The outcomes measures that require adjustment for patient acuity will be risk-adjusted prior to being presented. The Commission may utilize data that are already being collected for other purposes (e.g., by the MHA or HCFA). In those cases, the Steering Committee believes that the Commission should collect the data in the same manner. Any additional administrative burden on Maryland hospitals and ASFs should be minimized. However, the data collected by the Commission for this performance evaluation system may be utilized or presented in a fashion that is not the same as other data-collecting entities.
8. The HCFA 6<sup>th</sup> Scope of Work (SOW) quality indicators for the Medicare population only should be included in the initial hospital report. These measures are process indicators; and therefore, do not require risk-adjustment.
9. Some measures from the MHA's QI project should be included in the initial hospital report. Others should be pilot tested for future public reporting. Measures for immediate reporting include Device Associated Infections in Intensive Care Units and Prophylaxis for appendectomies and hysterectomies. Measures related to unscheduled readmissions and unscheduled returns will be pilot tested before being reported to the public. Complication and infection measures will be studied for inclusion in the report, while measures related to restraints and falls will require risk-adjustment and may be included in a future report.
10. The ASF report should include information on each ASF's tax status, facility type, owner name, direct or indirect ownership interest, and whether the ASF participates in Medicaid and/or Medicare. Information on hospital affiliation, board-certified anesthesiologist/certified registered nurse anesthetist on-staff will also be presented (this information is not currently collected). The Steering Committee recommends three measures be studied for inclusion in future reports. They are: post-operative infection rate; sedation complications; and rate of transfer to an acute care facility. The MHCC does not currently collect data related to these measures.

In the consumer guide section of the ASF report, consumers will be encouraged to consult with ASFs to obtain the most up-to-date information on what commercial insurance is accepted. Consumers will also be encouraged to ask practitioners about the number of times they have performed a particular procedure since individual practitioners may actually practice at several ASFs.

11. The Steering Committee came to a consensus that patient satisfaction information should not be incorporated in the initial Hospital/ASF performance evaluation. Since hospitals and ASFs do not use a common survey instrument, the Steering Committee concluded more information is needed in this area. Moreover, surveys currently used by hospitals may be designed to address a particular hospital's internal needs rather than for public reporting.
12. The Hospital/ASF Report Card Steering Committee should continue to meet periodically to monitor the progress of report development and consider new measures that have been validated including tools to assess patient satisfaction.

**Table I**

<b>Hospital Quality Indicators</b>	
<b>HCFA's Health Care Quality Indicator Program/ 6<sup>th</sup> Scope of Work</b>	<b>Report Date</b>
<b><u>Acute Myocardial Infarction</u></b>	July 2001
Administration of aspirin within 24 hours of arrival	July 2001
Aspirin prescribed at discharge	July 2001
Administration of B-blocker within 24 hours of arrival	July 2001
ACE inhibitor prescribed at discharge for patients with left ventricular ejection fraction <40%	July 2001
Smoking cessation counseling given during hospitalization	July 2001
Time to angioplasty, minutes	July 2001
Time to thrombolytic therapy, minutes	July 2001
<b><u>Breast Cancer</u></b>	July 2001
Mammogram for females aged 52-69 at least every 2 years (any setting)	July 2001
<b><u>Diabetes</u></b>	July 2001
Hemoglobin A1c at least every year (any setting)	July 2001
Eye examination at least every 2 years (any setting)	July 2001
Lipid profile at least every 2 years (any setting)	July 2001
<b><u>Heart Failure</u></b>	July 2001
Evaluation of left ventricular ejection fraction	July 2001
ACE inhibitor prescribed at discharge for patients with left ventricular ejection fraction <40%	July 2001
<b><u>Pneumonia</u></b>	July 2001
Antibiotic within 8 hours of arrival at hospital	July 2001
Antibiotic consistent with current recommendations	July 2001
Blood culture drawn (if done) before antibiotic given	July 2001
Patient screened for or given influenza vaccine	July 2001
Patient screened for or given pneumococcal vaccine	July 2001
Influenza immunization every year (any setting)	July 2001
Pneumococcal immunization at least once ever	July 2001
<b><u>Stroke</u></b>	July 2001
Warfarin prescribed for patients with atrial fibrillation	July 2001
Antithrombotic prescribed at discharge for patients with acute stroke or transient ischemic attack	July 2001
Avoidance of sublingual nifedipine for patients with acute stroke	July 2001

<b>Association of Maryland Hospitals &amp; Health Systems (MHA)</b>		<b>Report Date</b>
Indicator I-a	Device-Associated Infections in Intensive Care Units - <ul style="list-style-type: none"> <li>Central Line-Associated Bloodstream Infections</li> </ul>	July 2001
Indicator II-b	Prophylaxis for - <ul style="list-style-type: none"> <li>Appendectomy</li> <li>Vaginal Hysterectomy</li> <li>Abdominal Hysterectomy</li> </ul>	July 2001
Indicator VII	Unscheduled Readmissions	To be determined
Indicator IX	Unscheduled Returns to an Intensive Care Unit	To be determined
Indicator X	Unscheduled Returns to an Operating Room	To be determined
Indicator A-1	Unscheduled Returns to the Emergency Department	To be determined
Indicator XIV a-d	Complications following Sedation and Analgesia in Special Care Units, Cardiac Cath Labs, Gastroenterology Suites, and Emergency Departments	To be determined
Indicator II-a	Surgical Site Infections <ul style="list-style-type: none"> <li>Surgical Site Infections in Chest Incision Only Coronary Artery Bypass Graft (CABG) Patients</li> <li>Surgical Site Infections in Hip Arthroplasty Patients (classified as NNIS Risk Index)</li> </ul>	To be determined
Indicator XII	Restraint Use - Number of Physical Restraints Events	To be determined
Indicator XIII	Falls - Falls Resulting in Injury	To be determined

**APPENDIX A**  
**Enabling Legislation**

## **HOUSE BILL 705 (1999)**

### Section 19-135 of the Health General Article

(e) (1) The Commission may:

(i) On or before July 1, 2001, develop and implement a system to comparatively evaluate the quality of care outcomes and performance measurements of hospitals and ambulatory surgical facilities on an objective basis; and

(ii) Annually publish the summary findings of the evaluation.

(2) (i) The purpose of a comparable performance measurement system established under this section is to improve the quality of care provided by hospitals and ambulatory surgical facilities by establishing a common set of performance measurements and disseminating the findings of the performance measurements to hospitals, ambulatory surgical facilities, consumers, and interested parties.

(ii) In developing the performance measurement system, the Commission shall consider the geographic location, urban or rural orientation, and teaching or nonteaching status of the hospital and the ambulatory surgical facilities, and the health status of the population served.

(3) The system, where appropriate, shall solicit performance information from consumers.

(4) (i) The Commission may adopt regulations to establish the system of evaluation provided under this subsection.

(ii) Before adopting regulations to implement an evaluation system under this subsection, the Commission shall:

1. Consider the performance measurements of appropriate accreditation organizations, State licensure regulations, Medicare certification regulations, the Quality Indicator Project of the Association of Maryland Hospitals and Health Systems, and any other relevant performance measurements;

2. Evaluate the desirability and feasibility of developing a consumer clearinghouse on health care information using existing available data; and

3. On or before January 1, 2001, report to the General Assembly, subject to § 2-1246 of the State Government Article, on any performance evaluation developed under this subsection.

(5) The Commission may contract with a private entity to implement the system required under this subsection provided that the entity is not a hospital or an ambulatory surgical facility.

SECTION 2. AND BE IT FURTHER ENACTED, That the Health Care Access and Cost Commission [Maryland Health Care Commission] shall perform its duties specified in Section 1 of this Act in consultation with the Association of Maryland Hospitals and Health Systems, the Maryland Ambulatory Surgical Association, and interested parties, including consumers, payors, and employers.

SECTION 3. AND BE IT FURTHER ENACTED, That this Act shall take effect October 1, 1999.

## **APPENDIX B**

### **Hospital/Ambulatory Surgical Facility Report Card Steering Committee**

**HOSPITAL/AMBULATORY SURGICAL FACILITY  
REPORT CARD STEERING COMMITTEE**

<b>Name</b>	<b>Organization</b>
Barbara McLean or Enrique Martinez-Vidal or Kristin Helfer-Koester	Maryland Health Care Commission
Carol Benner	Department of Health and Mental Hygiene, Office of Health Care Quality
Valerie Shearer	Health Services Cost Review Commission
Lawrence Pinkner, M.D.	President, Maryland Ambulatory Surgical Association, Inc.
Rebecca Reid	Executive Director, Maryland Ambulatory Surgical Association, Inc.
Barbara Epke	Vice President Sinai Hospital
Steven S. Cohen	Vice President for Integrated Operations MedStar Health
William F. Minogue, MD	Sr. VP Medical Affairs Suburban Hospital Healthcare System
C. Daniel Mullins, Ph.D.	Pharmacy Practice & Science – University of Maryland
Marla T. Oros	Assistant Dean U of Md School of Nursing
Kathleen White, PhD, RN	Dir of Faculty Practice School of Nursing Johns Hopkins University
Albert Wu, MD, MPH	Associate Professor Dept of Health Policy and Management – JHU School of Hygiene & Public Health
Laurie Thomas	Consumer Member

Formed: January 2000

Basis: Hospital/Ambulatory Surgical Facility Performance Evaluation System required by Chapter 657 of 1999 (House Bill 705) to be implemented by July 2001

Appointed by the Executive Director of the MHCC

Chairman: Barbara McLean, Interim Executive Director, MHCC

Contact Person: Enrique Martinez-Vidal, Chief, Legislative and Special Projects, MHCC

## **APPENDIX C**

### **State Hospital/ASF Report Card Models**

**STATE HOSPITAL/ASF REPORT CARD MODELS**  
**Compiled by the Maryland Health Care Commission (7/2000)**

<b>Consumers' Guide to Maryland Hospitals (HSCRC) – April 1998</b>			
<b>Descriptor</b>	<b>Service Area or Group of Diseases</b>	<b>Indicators/Outcomes Measures</b>	<b>How Graded</b>
Hospital	<p>15 most common consolidated DRGs (CDRGs)</p> <p>Vaginal delivery without complicating diagnosis; psychoses; heart failure and shock; cesarean section; simple pneumonia, pleurisy, and interstitial lung disease, age&gt;17; esophagitis, gastroenteritis, and misc. digestive disorders, age&gt;17; uterine and adnexa procedures for non-malignancy; cerebrovascular disorders except transient ischemic attack; chest pain; chronic obstructive pulmonary disease; back and neck procedures; vaginal delivery with complicating diagnosis; cardiac arrhythmia and conduction; percutaneous cardiovascular procedures</p>	<ul style="list-style-type: none"> <li>Count (number of discharges)</li> <li>Average \$ (average total charge)</li> <li>Average length of stay</li> </ul>	<ul style="list-style-type: none"> <li>Without complications or comorbidity</li> <li>With complications or comorbidity</li> <li>With major complications or comorbidity</li> </ul>
Hospital	<p>Neonate birthweight 2500+ grams</p> <p>(Data are collected from the 15 CDRGs reported by MD hospitals in 1996)</p>	<ul style="list-style-type: none"> <li>Count (number of discharges)</li> <li>Average \$ (average total charge)</li> <li>Average length of stay</li> </ul>	<ul style="list-style-type: none"> <li>With minor or no problems</li> <li>With incidental or moderate problems</li> <li>With major problems</li> </ul>

Coronary Artery Bypass Surgery in New York State - 1995 to 1997			
Descriptor	Service Area or Group of Diseases	Indicators/Outcomes Measures	How Graded
Hospital	Coronary artery bypass graft (CABG) surgery	<ul style="list-style-type: none"> <li>• Number of cases</li> <li>• Deaths</li> <li>• Observed mortality rate</li> <li>• Expected mortality rate</li> <li>• Risk-adjusted mortality rate</li> <li>• 95% confidence interval for risk-adjusted mortality rate</li> </ul>	
Hospital	CABG	<ul style="list-style-type: none"> <li>• Risk-adjusted mortality rates for CABG in New York State, 1997 Discharges</li> </ul>	<ul style="list-style-type: none"> <li>• Against New York state average</li> </ul>
Hospital and Surgeon (or all others*) (*Surgeons who performed 200 or more isolated CABG operations during 1995-1997, and/or performed at least one isolated CABG operation in each of the years 1995-1997)	CABG (Surgeon Observed, Expected and Risk-Adjusted Mortality Rates (RAMR) for CABGs in New York State, 1995-1997 Discharges)	<ul style="list-style-type: none"> <li>• Cases</li> <li>• Number of deaths</li> <li>• Observed mortality rate</li> <li>• Expected mortality rate</li> <li>• Risk-adjusted mortality rate</li> <li>• 95% confidence interval for risk-adjusted mortality rate</li> </ul>	
Surgeon and hospitals (surgeons practicing at more than one hospital)	CABG	<ul style="list-style-type: none"> <li>• Cases</li> <li>• Number of deaths</li> <li>• Observed mortality rate</li> <li>• Expected mortality rate</li> <li>• Risk-adjusted mortality rate</li> <li>• 95% confidence interval for risk-adjusted mortality rate</li> </ul>	
Surgeon and Hospital	CABG (Total Cardiac Surgery and Isolated CABG Surgery Volumes by Hospital and Surgeon, 1995-1997)	<ul style="list-style-type: none"> <li>• Total cardiac surgery</li> <li>• Isolated CABGs</li> <li>• % Isolated CABG</li> </ul>	

<b>Cardiac Surgery in New Jersey – March 1999</b>			
<b>Descriptor</b>	<b>Service Area or Group of Diseases</b>	<b>Indicators/Outcomes Measures</b>	<b>How Graded</b>
Hospital	Coronary artery bypass graft (CABG) surgery  <u>(1996 and 1997 data collected by the Department of Health and Senior Services)</u>	Number of CABG surgeries/hospital	
Hospital	CABG	Hospital risk-adjusted mortality rates for CABG surgery	Against the state avg. mortality rate
Hospital and surgeon name	CABG	Surgeon risk-adjusted mortality rates	Against the state avg. mortality rate

<b>Southeast Michigan Hospital Performance Profile...A Consumer Guide (March 1998)</b>			
<b>Descriptor</b>	<b>Service Area or Group of Diseases</b>	<b>Indicators/Outcomes Measures</b>	<b>How Graded</b>
Hospital City	<p>Medical Care (“What Patients Say”)</p> <p>(The Picker Institute conducted the survey during early 1997 and interpreted the results)</p>	<ul style="list-style-type: none"> <li>• Respect for Patients</li> <li>• Care Coordination</li> <li>• Information &amp; Education</li> <li>• Comfort &amp; Pain Mgt.</li> <li>• Emotional Support</li> <li>• Involvement of Family &amp; Friends</li> <li>• Discharge Preparation</li> <li>• All Indicators Combined</li> </ul>	<ul style="list-style-type: none"> <li>• Better than the national average (all hospitals in database) (***)</li> <li>• Same as the national average (**)</li> <li>• Worse than the national average (*)</li> </ul> <p>Each hospital’s results, adjusted for patient characteristics, were compared with the average of a large national database of survey results maintained by the Picker Institute</p>
Hospital City	<p>Medical Care (“The Outcomes”)</p> <p>* LOS, mortality, and complications are risk-adjusted and measured against the expected performance (the number of cases, how severely ill the patients were when admitted, and the performance of other hospitals nationally treating similar conditions and performing similar procedures)</p> <p>(Outcome data are from the Michigan Health and Hospital Association’s Michigan Inpatient Database – 1996)</p>	<p>Heart Care</p> <ul style="list-style-type: none"> <li>• Number of Cases</li> <li>• Length of Hospital Stay</li> <li>• Mortality</li> <li>• Cost per Case</li> </ul> <p>Respiratory Care (same as above)</p>	<ul style="list-style-type: none"> <li>• Better than the expected (***)</li> <li>• Same as expected (**)</li> <li>• Worse than expected (*)</li> <li>• Low volume – too few cases to analyze (&lt;30)</li> <li>• Not offered- treatment not offered by hospital</li> </ul> <p>Individual hospital comparative information comes from the Michigan Health and Hospital Association’s Michigan Inpatient Database.</p>
Hospital City	Medical Care (“for Specific Diseases”)	<p>Heart Failure</p> <ul style="list-style-type: none"> <li>• Number of Cases</li> <li>• Length of Hospital Stay</li> <li>• Mortality</li> <li>• Complications</li> <li>• Cost per Case</li> </ul> <p>Heart Attack (same as above)</p>	<ul style="list-style-type: none"> <li>• Better than the expected (***)</li> <li>• Same as expected (**)</li> <li>• Worse than expected (*)</li> <li>• Low volume – too few cases to analyze (&lt;30)</li> <li>• Not offered- treatment not offered by hospital</li> </ul>

Hospital City	Surgical Care (“the Outcomes”)	Heart Surgery <ul style="list-style-type: none"> <li>• Number of Cases</li> <li>• Length of Hospital Stay</li> <li>• Mortality</li> <li>• Complications</li> <li>• Cost per Case</li> </ul> Lower Joint Replacement Surgery (same as above excluding mortality)	<ul style="list-style-type: none"> <li>• Better than the expected (***)</li> <li>• Same as expected (**)</li> <li>• Worse than expected (*)</li> <li>• Low volume – too few cases to analyze (&lt;30)</li> <li>• Not offered- treatment not offered by hospital</li> </ul>
Hospital City	Surgical Care (“for Specific Diseases”)	Colon Resection <ul style="list-style-type: none"> <li>• Number of Cases</li> <li>• Length of Stay</li> <li>• Mortality</li> <li>• Complications</li> <li>• Cost per Case</li> </ul> Endarterectomy (same as above)	<ul style="list-style-type: none"> <li>• Better than the expected (***)</li> <li>• Same as expected (**)</li> <li>• Worse than expected (*)</li> <li>• Low volume – too few cases to analyze (&lt;30)</li> <li>• Not offered- treatment not offered by hospital</li> </ul>
Hospital City	Childbirth Care (“the Outcomes”)	C-Section Deliveries <ul style="list-style-type: none"> <li>• Total Number of Deliveries</li> <li>• Number of C-Section Deliveries</li> <li>• As a percent of births</li> <li>• Cost per Case</li> </ul> Vaginal Births After Prior C-Section (VBACs) <ul style="list-style-type: none"> <li>• Number of Possible Cases</li> <li>• Number of VBAC Deliveries</li> <li>• As a Percent of Possible Cases</li> <li>• Cost per Case</li> <li>• Complication for C-Section and VBAC births</li> </ul>	<ul style="list-style-type: none"> <li>• Better than the expected (***)</li> <li>• Same as expected (**)</li> <li>• Worse than expected (*)</li> <li>• Low volume – too few cases to analyze (&lt;30)</li> <li>• Not offered- treatment not offered by hospital</li> </ul>

<b>The Greater Cleveland Consumer Report on Hospital Performance (June 1998)</b>			
<b>Descriptor</b>	<b>Service Area or Group of Diseases</b>	<b>Indicators/Outcomes Measures</b>	<b>How Graded</b>
Hospital	General medical outcomes  (Outcome data are subcategorized from 7/94 to 6/97)	<ul style="list-style-type: none"> <li>• Mortality rate (observed death rate vs. predicted death rate)</li> <li>• Length of stay (observed LOS vs. predicted LOS)</li> </ul>	Severity-adjusted and compared to the hospital average and the overall average for hospitals in Cleveland (observed outcomes are compared to outcomes predicted)  Arrow symbols (➡)
Hospital	General surgery outcomes	<ul style="list-style-type: none"> <li>• Observed LOS vs. predicted (severity adjusted) LOS – combines outcomes procedures of seven surgical procedures</li> </ul>	
Hospital	Intensive care outcomes	<ul style="list-style-type: none"> <li>• Observed mortality and LOS vs. predicted (severity adjusted) ranges using APACHE</li> </ul>	
Hospital	Obstetrical outcomes	<ul style="list-style-type: none"> <li>• Cesarean section rates for mothers without a prior c-section delivery, vaginal births after a prior c-section delivery rate, and total c-section rates (rate of c-sections in women with or without a prior c-section)</li> </ul>	
Hospital	Outcomes by Clinical Services	<ul style="list-style-type: none"> <li>• Intensive care mortality and LOS</li> <li>• General medical/surgical mortality and LOS</li> </ul>	
Hospital	Patient Satisfaction  (Used the Patient Viewpoint Survey which has 75 questions about 11 hospital service areas)	<ul style="list-style-type: none"> <li>• Medical/surgical patient satisfaction</li> <li>• Obstetric patient satisfaction</li> </ul>	Patient satisfaction is measured by Global satisfaction and Total process satisfaction

<b>California Hospital Outcomes Project (1997)</b>			
<b>Descriptor</b>	<b>Service Area or Group of Diseases</b>	<b>Indicators/Outcomes Measures</b>	<b>How Graded</b>
Hospital	<p>Acute myocardial infarction, maternal outcomes following delivery, hip fracture, intensive care unit, and pneumonia (outcomes reports)</p> <p>(1991, 1992, 1993 cases)</p>	<p>Acute Myocardial Infarction</p> <ul style="list-style-type: none"> <li>• Statewide death rate (%)</li> <li>• Number of cases included</li> <li>• Number of observed deaths</li> <li>• Number of expected deaths</li> <li>• Standard deviation of the observed deaths</li> <li>• Observed death rate (%)</li> <li>• Expected death rate (%)</li> <li>• Risk-adjusted death rate (%)</li> <li>• Risk adjusted 95% confidence bounds</li> <li>• Probability this rate occurred by chance</li> </ul>	<p>Risk adjusted and validated</p> <p>Hospital results are summarized in two tables. The first table shows which hospitals have mortality rates significantly better or worse than expected. The second table compares each hospital's overall risk-adjusted mortality rate with the statewide rate.</p> <p>Symbols represent four categories of overall results for 1991 through 1993</p>

1999 Guide to Hospitals in Florida			
Descriptor	Service Area or Group of Diseases	Indicators/Outcomes Measures	How Graded
General Information - <ul style="list-style-type: none"> <li>Hospital</li> <li>City</li> </ul>	(General Information data was obtained from ACHA's Hospital Financial Database)	Facility Data by Region <ul style="list-style-type: none"> <li>General Information               <ul style="list-style-type: none"> <li>Type of Hospital</li> <li>Type of Ownership</li> <li>Accreditation</li> <li>Total Licensed Beds</li> <li>Total Acute Care Beds</li> </ul> </li> </ul> Delivery Information - <ul style="list-style-type: none"> <li>Delivery Information               <ul style="list-style-type: none"> <li>Total Deliveries</li> <li>Cesarean Rate</li> <li>VBAC</li> </ul> </li> </ul> Hospital Inpatient Data <ul style="list-style-type: none"> <li>Service Line</li> <li>Average Survival Rate</li> <li>Minimum Survival Rate</li> <li>Total Discharges</li> <li>Average Charges               <ul style="list-style-type: none"> <li>Observed</li> <li>Expected</li> <li>Significance</li> </ul> </li> <li>Average length-of-stay               <ul style="list-style-type: none"> <li>Observed</li> <li>Expected</li> <li>Significance</li> </ul> </li> </ul>	(Charges and LOS values are presented only if the hospital discharged at least 100 patients in the service line during the reporting period)
Hospital Inpatient Data	Cardiac surgery, cardiology, gastroenterology, general surgery, gynecology, neonatology, neurology, neurosurgery, obstetrics, oncology, orthopedics, other medicine, pediatrics, pulmonary medicine, urology, vascular and other thoracic surgery		
Region/Hospital City	(Data was collected from ACHA's Hospital Inpatient Discharge Database - 1995 and 1996)		

Descriptor	Service Area or Group of Diseases	Indicators/Outcomes Measures	How Graded
		<p>(Example) Cardiac Surgery – 1996 Hospital Inpatient Data</p> <ul style="list-style-type: none"> <li>• Region/Hospital</li> <li>• City</li> <li>• Total Discharges</li> <li>• Average Charges <ul style="list-style-type: none"> <li>- Observed</li> <li>- Expected</li> <li>- Significance</li> </ul> </li> <li>• Average Length of Stay <ul style="list-style-type: none"> <li>- Observed</li> <li>- Expected</li> <li>- Significance</li> </ul> </li> </ul>	<p>The following symbols show the relationship between each hospital's <i>observed</i> and <i>expected</i> values.</p> <p>E – 15% of hospitals with the most favorable performance; the observed is statistically different from the expected at the 95% confidence level</p> <p>AE – hospitals whose performance differs significantly (<math>p &lt; 0.05</math>) from other hospitals in Florida; hospitals are within the central 70% of the distribution</p> <p>O – 15% of hospitals with the least favorable performance; where the observed is statistically different from the expected at the 95% confidence level</p> <p>- Indicated no significant difference in performance on this measure (charges, length of stay) compared to other hospitals in Florida</p> <p>Blank columns indicate that a hospital treated fewer than 100 cases in this service line</p>

Pennsylvania / A Hospital Performance Report – 15 Common Medical Procedures and Treatments (regional) - 1999			
Descriptor	Service Area or Group of Diseases	Indicators/Outcomes Measures	How Graded
Hospital	<p>15 DRGs- Heart attack, heart failure and shock, major vessel operations, vascular operations, vascular disorders, stroke, adult pneumonia, adult lung infection, lung cancer, adult diabetes, kidney failure, adult septicemia, gastrointestinal bleeding, major intestinal procedures, hip operations</p> <p>(1997 data compiled by the PA Cost Containment Council)</p>	<p>Inpatient Hospital Discharges (1997)</p> <ul style="list-style-type: none"> <li>• Volume of Cases</li> <li>• Risk-adjusted mortality rates</li> <li>• Risk-adjusted length-of-stay</li> <li>• Average hospital charge</li> </ul> <p>(Each region's total number of cases, average LOS, and average charge is compared to the statewide averages)</p>	<p>Symbols representing risk-adjusted mortality ratings –</p> <ul style="list-style-type: none"> <li>• Mortality significantly greater than expected</li> <li>• Mortality not significantly different than expected</li> <li>• Mortality significantly less than expected</li> <li>• (Did not submit required data)</li> <li>• (Had fewer than five cases evaluated)</li> </ul>

<b>Ambulatory Surgery in Pennsylvania – Comparisons of Ambulatory Surgical Data with Inpatient Data (1996)</b>			
<b>Descriptor</b>	<b>Service Area or Group of Diseases</b>	<b>Indicators/Outcomes Measures</b>	<b>How Graded</b>
	Inpatient procedures vs. ambulatory surgical procedures (matched codes)	<ul style="list-style-type: none"> <li>• Volume comparison across setting (by body system)</li> <li>• Setting comparison by body system</li> <li>• Volume percentage of ambulatory surgery cases vs. inpatient cases by age cohort</li> <li>• Average age of ambulatory surgery cases vs. inpatient cases by body system</li> <li>• Volume percentage of ambulatory surgery cases vs. inpatient cases by hospital region</li> <li>• Comparison across setting according to gender</li> <li>• Percentage of ambulatory surgery cases vs. inpatient cases and the admission severity group (ASG% is inpatient only)</li> <li>• Ambulatory surgery cases vs. inpatient cases by body system</li> <li>• Ambulatory surgery cases vs. inpatient cases by age cohort</li> <li>• Ambulatory surgery cases vs. inpatient cases by hospital region</li> <li>• Ambulatory surgery cases vs. inpatient cases by gender</li> <li>• Ambulatory surgery cases vs. inpatient cases by collected procedures</li> </ul>	<p>Percentage comparison between am/surg cases and inpatient cases</p> <p>Number and percentage comparison between am/surg cases and inpatient cases</p>

<b>Missouri Department of Health – Hospital Emergency Services (Buyer’s Guide) - 1997</b>			
<b>Descriptor</b>	<b>Service Area or Group of Diseases</b>	<b>Indicators/Outcomes Measures</b>	<b>How Graded</b>
City/County & Hospital	Hospital Summary Scores  (points awarded)	<ul style="list-style-type: none"> <li>• Emergency Services Personnel</li> <li>• Pediatric Capabilities</li> <li>• Support Services</li> <li>• Triage and Transfer</li> <li>• Waiting Time</li> <li>• Quality Improvement Activities</li> <li>• Patient Satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• High</li> <li>• Average</li> <li>• Low</li> <li>• Not reported</li> <li>• Not surveyed</li> <li>• Did not participate</li> </ul>
City/County & Hospital	Facility Information  (Data from 1995 Annual Licensing Survey and the Missouri Department of Health – 1996)	<ul style="list-style-type: none"> <li>• Open 24 hours</li> <li>• Number of Visits</li> <li>• Emergency Department Level (1,2,3,4)</li> <li>• Trauma Center Level (I, II, or III)</li> <li>• Fast-Track Care</li> </ul>	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>
City/County & Hospital	Emergency Services Personnel  (Data from the Missouri Department of Health – 1996)	<ul style="list-style-type: none"> <li>• Medical Director Board Certified</li> <li>• Medical Director Specialized Training</li> <li>• Full-time Physicians Board Certified (%)</li> <li>• Full-time Physicians Emergency Medicine</li> <li>• RNs in ER 24 Hours per Day</li> <li>• RNs with Specialized Training (%)</li> <li>• Other Specialties on Call</li> <li>• Mental Health Providers on Call</li> </ul>	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Not Applicable for children’s Hospitals</li> </ul>

Descriptor	Service Area or Group of Diseases	Indicators/Outcomes Measures	How Graded
City/County & Hospital	Pediatric Capabilities	<ul style="list-style-type: none"> <li>Specialized Pediatric ER Training</li> <li>Full-time pediatricians</li> <li>Part-time pediatricians</li> <li>Nurses with Specialized Training (%)</li> <li>Specialized Pediatric Trays</li> <li>Child Abuse Team</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> </ul>
City/County & Hospital	Support Services	<ul style="list-style-type: none"> <li>Has an ICU</li> <li>Pharmacy Open 24 hours/Day</li> <li>Operating Room Ready 24 hour/day</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> </ul>
City/County & Hospital	Triage and Transfer	<ul style="list-style-type: none"> <li>Triage policy in place</li> <li>Chest pain protocol</li> <li>Transfer agreements for emergent patients</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> </ul>
City/County & Hospital	Waiting Time	<ul style="list-style-type: none"> <li>Percent of emergent patients waiting less than 15 minutes</li> <li>Percent of urgent patients waiting less than 30 minutes</li> <li>Percent of non-urgent patients waiting less than 60 minutes</li> </ul>	<ul style="list-style-type: none"> <li>95 percent or more (high)</li> <li>50 to 94 percent (average)</li> <li>Less than 50 percent (low)</li> <li>Hospital did not report (not reported)</li> </ul>
City/County & Hospital	Quality Improvement Activities	<ul style="list-style-type: none"> <li>Quality improvement program in place</li> <li>Policy regarding follow-up</li> <li>Number of quality indicators monitored within the last three years</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> </ul>
	Patient Satisfaction  (Survey of 300 adult patients who visited the hospitals emergency services departments during the spring of 1996 was conducted by the Picker Institute)	<ul style="list-style-type: none"> <li>Respect for patient preferences</li> <li>Information and education</li> <li>Emotional support</li> <li>Access and coordination of care</li> <li>Continuity of care</li> </ul>	<ul style="list-style-type: none"> <li>High</li> <li>Average</li> <li>Low</li> </ul>

<b>Missouri Department of Health – Obstetrical Services (Buyer’s Guide)</b>			
<b>Descriptor</b>	<b>Service Area or Group of Diseases</b>	<b>Indicators/Outcomes Measures</b>	<b>How Graded</b>
Hospitals & “Rest of Region”	“Hospitals with high or low charges and quality indicators”	<ul style="list-style-type: none"> <li>Charges (low charges vs. high charges)</li> </ul>	Lists hospitals in three counties and compares them with the rest of the region
	(Data regarding services of the hospitals were obtained from a telephone survey conducted by the Department of Health in the summer of 1993)	<ul style="list-style-type: none"> <li>Services (more services vs. fewer services)</li> </ul>	(same as above)
	(Information concerning the provision of care for each hospital was obtained from either birth certificate information or from the 1992 annual hospital licensing survey)	<ul style="list-style-type: none"> <li>Provision of Care (highest provision of care indicators vs. lowest provision of care indicators)</li> </ul>	(same as above)
		<ul style="list-style-type: none"> <li>Newborn Deaths (fewer than expected newborn deaths vs. more than expected newborn deaths)</li> </ul>	(same as above)
		<ul style="list-style-type: none"> <li>Patient Satisfaction (high patient satisfaction vs. low patient satisfaction)</li> </ul>	(same as above)
County & Hospital	Facility Charges	<ul style="list-style-type: none"> <li>Vaginal delivery 2-day stay for mothers</li> <li>Cesarean section 4-day stay for mothers</li> <li>Normal newborn 2-day stay for babies</li> </ul>	<ul style="list-style-type: none"> <li>Dollar amount</li> </ul> (includes the overall region low, median, high and state median)
County & Hospital	Average Length of Stay	<ul style="list-style-type: none"> <li>Vaginal deliveries</li> <li>Cesarean sections</li> <li>Normal newborn</li> </ul>	<ul style="list-style-type: none"> <li>Days</li> </ul>

Descriptor	Service Area or Group of Diseases	Indicators/Outcomes Measures	How Graded
County & Hospital	Other	<ul style="list-style-type: none"> <li>• 1992 total live births</li> <li>• Level of care (OB &amp; nursery)</li> <li>• Labor/delivery/recovery/postpartum beds available</li> </ul>	<ul style="list-style-type: none"> <li>• I, II, III</li> <li>• Yes/No</li> </ul>
County & Hospital	Services	<ul style="list-style-type: none"> <li>• Car seat program and policy in place</li> <li>• Follow-up services available</li> <li>• Formal transfer agreement</li> <li>• Nurse-education for breastfeeding</li> <li>• Tubal ligations available</li> </ul>	<ul style="list-style-type: none"> <li>• Offers service</li> <li>• Does not offer service</li> </ul>
County & Hospital	Provision of Care	<ul style="list-style-type: none"> <li>• Cesarean section rate</li> <li>• High-risk infants transferred rate</li> <li>• Ultrasound rate</li> <li>• Vaginal birth after cesarean rate</li> <li>• Very low birth weight rate</li> </ul>	<p>Quality Level</p> <ul style="list-style-type: none"> <li>• Low (rate of cesarean deliveries is &gt;29% of births)</li> <li>• Average (rate is 16% - 29%)</li> <li>• High (rate is &lt; 16% of births)</li> </ul> <p>(includes the overall region low, median, high and state median)</p>
County & Hospital	Outcome	<ul style="list-style-type: none"> <li>• Newborn deaths</li> <li>• Satisfaction with admission/discharge</li> <li>• Satisfaction with billing parties</li> <li>• Satisfaction with nurses</li> <li>• Satisfaction with other staff</li> <li>• Satisfaction with physical activity</li> <li>• Satisfaction with physicians</li> </ul>	<p>Quality Level</p> <ul style="list-style-type: none"> <li>• Low (the number of deaths was significantly more than predicted after adjusting the 1981-1992 data by risk categories)</li> <li>• Average (the number of deaths was close to the predicted level)</li> <li>• High (the number of deaths was less than expected in the facility)</li> </ul>

<b>Massachusetts Acute Care Hospital Statewide Patient Survey Process – 1998 Report</b>			
Hospital	<p>Medical Patients</p> <p>(Questionnaires were mailed to 600 medical, surgical, and maternity patients recently discharged from each of the 51 participating hospitals and health systems – 1998. A total of 12,680 patients responded to the survey)</p>	<ul style="list-style-type: none"> <li>• Patient preferences</li> <li>• Coordination of care</li> <li>• Information and Education</li> <li>• Physical comfort</li> <li>• Emotional support</li> <li>• Involvement of family and friends</li> <li>• Continuity and transition</li> </ul>	<p>A black circle denotes each hospital's performance score, adjusted for variations in patient characteristics.</p> <p>Gray bars denote 95% confidence interval.</p> <p>The thick vertical line denotes the MHQP mean.</p> <p>The thin vertical line denotes the US average (Picker Institute)</p>
Hospital	Surgical patients	<ul style="list-style-type: none"> <li>• Patient preferences</li> <li>• Coordination of care</li> <li>• Information and Education</li> <li>• Physical comfort</li> <li>• Emotional support</li> <li>• Involvement of family and friends</li> <li>• Continuity and transition</li> </ul>	(same as above)
Hospital	Maternity patients	<ul style="list-style-type: none"> <li>• Patient preferences</li> <li>• Coordination of care</li> <li>• Information and Education</li> <li>• Physical comfort</li> <li>• Emotional support</li> <li>• Involvement of family and friends</li> <li>• Continuity and transition</li> </ul>	(same as above)
Hospital	Letters of Comment	Letters from hospital executives are featured providing background context around individual hospital performance results, highlighting improvements in service.	

**APPENDIX D**

**Quality Improvement Projects**

**The Health Care Financing Administration's (HCFA's)  
Health Care Quality Improvement Program (HCQIP)**

The HCFA and its contractors, Peer Review Organizations (e.g., Delmarva Foundation), initiated the HCQIP. The program was launched in 1992 with a focus on improving the health of Medicare beneficiaries. The following six clinical priority areas and associated measures encompass the HCQIP –

1. Acute Myocardial Infarction
  - a. Administration of aspirin within 24 hours of arrival
  - b. Aspirin prescribed at discharge
  - c. Administration of Beta-blocker within 24 hours of arrival
  - d. Beta-blocker prescribed at discharge
  - e. ACE inhibitor prescribed at discharge for patients with left ventricular ejection fraction <40%
  - f. Smoking cessation counseling given during hospitalization
  - g. Time to angioplasty, minutes
  - h. Time to thrombolytic therapy, minutes
2. Breast Cancer
  - a. Mammogram for female beneficiaries aged 52-69 at least every 2 years (any setting)
3. Diabetes
  - a. Hemoglobin A1c at least every year (any setting)
  - b. Eye examination at least every 2 years (any setting)
  - c. Lipid profile at least every 2 years (any setting)
4. Heart Failure
  - a. Evaluation of left ventricular ejection fraction
  - b. ACE inhibitor prescribed at discharge for patients with left ventricular ejection fraction <40%
5. Pneumonia
  - a. Antibiotic within 8 hours of arrival at hospital
  - b. Antibiotic consistent with current recommendations
  - c. Blood culture drawn (if done) before antibiotic given
  - d. Patient screened for or given influenza vaccine
  - e. Patient screened for or given pneumococcal vaccine
  - f. Influenza immunization every year (any setting)
  - g. Pneumococcal immunization at least once ever (any setting)
6. Stroke
  - a. Warfarin prescribed for patients with atrial fibrillation
  - b. Antithrombotic prescribed at discharge for patients with acute stroke or transient ischemic attack
  - c. Avoidance of sublingual nifedipine for patients with acute stroke

Twenty-four process-of-care measures were adopted or developed relating to primary prevention, secondary prevention, or treatment of the six clinical areas (also known as HCFA's 6<sup>th</sup> Scope of Work (SOW) measures).

## **Association of Maryland Hospitals & Health Systems (MHA) Quality Indicator Project**

The MHA's Quality Indicator Project is a research effort aimed at giving hospitals tools they can use to continually improve the quality of care they deliver. At the core of the Project are 15 inpatient and ambulatory outcomes-based clinical indicators, which are calculated for each of the Maryland hospitals involved in the project. These indicators include several mortality, infection, and unscheduled readmission rates. The Project provides each hospital with information on their own rates over time, as well as aggregate rates, so the hospital's staff can pinpoint areas that may need improvement. Currently, each hospital can choose which indicators it reports; some may report on all indicators and others may not report any data. The data that is collected is standardized and comparable. For some of the indicators, stratification techniques, as opposed to risk-adjustment, are used to identify and classify patients by risk factors.

The following is a list of acute care indicators —

### Inpatient Indicators

Indicator I-a	Device-Associated Infections in Intensive Care Units
Indicator I-b	Device Use in Intensive Care Units
Indicator II-a	Surgical Site Infections
Indicator II-b	Prophylaxis for Surgical Procedures
Indicator III	Inpatient Mortality
Indicator IV	Neonatal Mortality
Indicator V	Perioperative Mortality
Indicator VI	Management of Pregnancy
Indicator VII	Unscheduled Readmissions
Indicator VIII	Unscheduled Admissions Following Ambulatory Procedures
Indicator IX	Unscheduled Returns to an Intensive Care Unit
Indicator X	Unscheduled Returns to an Operating Room
Indicator XI	Isolated Coronary Artery Bypass Graft (CABG) Perioperative Mortality
Indicator XII	Restraint Use
Indicator XIII	Falls

Indicator XIV	Complications following Sedation and Analgesia in Special Care Units, Cardiac Cath Labs, Gastroenterology Suites, and Emergency Departments
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Ambulatory Indicators

Indicator A-1	Unscheduled Returns to the Emergency Department
Indicator A-2	Length of Stay in the Emergency Department
Indicator A-3	Emergency Department X-ray Discrepancies and Patient Management
Indicator A-4	Patients Leaving the Emergency Department before Completing Treatment
Indicator A-5	Cancellation of Ambulatory Procedures

**Future Joint Commission on Accreditation of Health Care Organization  
Performance Requirements  
(Core Measure Sets)**

1. Acute Myocardial Infarction (coronary artery disease)
  - Smoking Cessation Advice/Counseling
  - Reperfusion Therapy: Time from Arrival to Initiation
  - Beta Blocker at Arrival
  - Beta Blocker at Discharge
  - LVEF < 40% Prescribed ACEI at Discharge
  - Aspirin at Discharge
  - Aspirin at Arrival
  - Interhospital Mortality
  - Mortality Within 30 Days Post AMI
  - Lipid Profile
  - Cholesterol Management
2. Heart Failure
  - Smoking Cessation Advice/Counseling
  - Left Ventricular Ejection Fraction < 40% Prescribed ACEI at Discharge
  - Assessment of Left Ventricular Function
  - Diet/Weight/Medication Management Instructions at Discharge
  - Patients with Atrial Fibrillation Prescribed Warfarin at Discharge
3. Community Acquired Pneumonia
  - Antibiotic Timing
  - Empiric Antibiotic Regimen ICU
  - Empiric Antibiotic Regimen Non-ICU
  - Pneumonia Screen or Pneumococcal Vaccination
  - Blood Cultures
  - Smoking Cessation Advice/Counseling
  - Influenza Screen or Vaccination Age > 65
  - Influenza Screen or Vaccination Age < 65
  - Switch from IV to Oral Antibiotic
  - Timely Discharge after Antibiotic Switch
  - Excessive Antibiotics
  - Risk Adjusted Mortality
  - Oxygenation Assessment
4. Pregnancy and Related Conditions (maternal/newborn)
  - Prenatal Record
  - Induction of Labor
  - Steroid Administration
  - 3<sup>rd</sup> or 4<sup>th</sup> Degree Laceration
  - Neonatal Transfer to Perinatal Center
  - Neonatal Mortality

- Primary Cesarean Section Rate
  - Attempted VBAC Rate
  - Maternal Transfer to Perinatal Center
  - VBAC Rate
  - Episiotomy Rate
5. Surgical Procedures and Complications
- Surgical Site Infection within 30 Days (For Selected Surgical Procedures)
  - Timing of Prophylactic Administration of Antibiotic
  - Thromboembolic Prophylaxis
  - Surveillance of Deep Vein Thrombosis and Pulmonary Embolism
  - Unplanned Return to the Operation Room
  - Laparoscopic Procedure Complications
  - Mortality Open Heart Procedures
  - Pre-operative/Post-operative Patient Education

## **APPENDIX E**

### **Sample Hospital Report**

The Maryland Health Care Commission was required by the 1999 Maryland General Assembly to develop and implement a system to comparatively evaluate the quality of care outcomes and performance measurements of hospitals and ambulatory surgical facilities. At this time, the MHCC provides descriptive and process-based information on Maryland acute care hospitals.

In order to access the list of acute care hospitals, choose a county (NOTE: These would be pull-down boxes):

## COUNTY

Allegany
Anne Arundel
Baltimore City
Baltimore County
Calvert
Caroline
Carroll
Cecil
Charles
Dorchester
Frederick
Garrett
Harford
Howard
Kent
Montgomery
Prince George's
Queen Anne's
Somerset
St. Mary's
Talbot
Washington
Wicomico
Worcester

Example: Consumer has chosen Montgomery County. Consumer would then click on the specific facility to get information on that facility. (NOTE: Consumer picks Holy Cross. See next page for an example of detailed facility information that is being considered).

[Holy Cross Hospital](#)

[Montgomery General Hospital](#)

[Shady Grove Adventist](#)

[Suburban Hospital](#)

[Washington Adventist Hospital](#)

# HOSPITAL IN-PATIENT INFORMATION

Name		Address/Phone Number		Tax Status	JCAHO Accreditation Status
Holy Cross Hospital		1500 Forest Glen Road Silver Spring, MD 20910 301-754-7000		Non-profit	

  

Medicaid Participant	Total Number of Physicians	Ratio of Board-Certified Physicians to Total Number of Physicians*	Number of Licensed Beds	Teaching Status	System Affiliation
Y/N				Non-Teaching	

  

Payer Source	Estimated Percentage of Net Revenue	Common Medical Procedures and Treatments (based on DRGs)**	Number of Cases
Maryland Medicaid		Heart Attack (121,122,123)	
Medicaid (Other States)		Heart Failure and Shock (127)	
Medicare		Major Vessel Operations except Heart (110)	
		Vascular Operations except Heart (478)	
<b>Licensure &amp; Certification</b>		Vascular Disorders except Heart (130)	
Medicare Certification	Y/N	Stroke (14)	
State licensure	Current/not current	Adult Pneumonia (89)	
Other Certification		Adult Lung Infections (79)	
		Lung Cancer (82)	
		Adult Diabetes (294)	
		Kidney Failure (316)	
		Adult Septicemia (416)	
		Gastrointestinal Bleeding (174)	
		Major Intestinal Procedures (148)	
		Hip Operations, except Replacements - Adults (210)	

  

Quality Indicators	Measure***
<b><u>Acute Myocardial Infarction</u></b>	Above state average, below state average or at state average
Administration of aspirin within 24 hours of admission	(see above)
Aspirin prescribed at discharge	(see above)
Administration of B-blocker within 24 hours of admission	(see above)
ACE inhibitor prescribed at discharge for patients with left ventricular ejection fraction <40%	(see above)
Smoking cessation counseling given during hospitalization	(see above)
Time to angioplasty, minutes	(see above)
Time to thrombolytic therapy, minutes	(see above)
<b><u>Breast Cancer</u></b>	(see above)
Mammogram at least every 2 years (any setting)	(see above)
<b><u>Diabetes</u></b>	(see above)
Hemoglobin A1c at least every year (any setting)	(see above)

Eye examination at least every 2 years (any setting)	(see above)
Lipid profile at least every 2 years (any setting)	(see above)
<b><u>Heart Failure</u></b>	
Evaluation of left ventricular ejection fraction	(see above)
ACE inhibitor prescribed at discharge for patients with left ventricular ejection fraction <40%	(see above)
<b><u>Pneumonia</u></b>	
Antibiotic within 8 hours of arrival at hospital	(see above)
Antibiotic consistent with current recommendations	(see above)
Blood culture drawn (if done) before antibiotic given	(see above)
Patient screened for or given influenza vaccine	(see above)
Patient screened for or given pneumococcal vaccine	(see above)
Influenza immunization every year (any setting)	(see above)
Pneumococcal immunization at least once ever	(see above)
<b><u>Stroke</u></b>	
Warfarin prescribed for patients with atrial fibrillation	(see above)
Antithrombotic prescribed at discharge for patients with acute stroke or transient ischemic attack	(see above)
Avoidance of sublingual nifedipine for patients with acute stroke	(see above)
<b><u>Device -Associated Infections in Intensive Care Units</u></b>	
Central line-associated bloodstream infections	(see above)
<b><u>Prophylaxis for Surgical Procedures</u></b>	
Appendectomy	(see above)
Vaginal hysterectomy	(see above)
Abdominal hysterectomy	(see above)
<b>Special Services</b>	

\* Since residents and fellows have not completed their training and/or are not eligible to take the medical boards, they are not included in this tabulation.

\*\* These procedures/DRGs come from the Pennsylvania Health Care Cost Containment Council's *A Hospital Performance Report* – they are examples and would be open for discussion.

\*\*\* Could be done either as: (1) Actual significantly greater than/not significantly different than/significantly less than Expected; or (2) Individual Hospital Average is greater than/equal to/less than State Average.

## **APPENDIX F**

### **Sample Ambulatory Surgical Facility Reports**

The Maryland Health Care Commission was required by the 1999 Maryland General Assembly to develop and implement a system to comparatively evaluate the quality of care outcomes and performance measurements of hospitals and ambulatory surgical facilities. At this time, the MHCC provides descriptive information on Maryland ambulatory surgical facilities, which includes outpatient procedures performed by both hospital-based and freestanding facilities.

In order to access the list of ambulatory surgery centers, first choose a county and then choose one of the 17 specialties (NOTE: These would be pull-down boxes):

## COUNTY

Allegany
Anne Arundel
Baltimore City
Baltimore County
Calvert
Caroline
Carroll
Cecil
Charles
Dorchester
Frederick
Garrett
Harford
Howard
Kent
Montgomery
Prince George's
Queen Anne's
Somerset
St. Mary's
Talbot
Washington
Wicomico
Worcester

## SPECIALTY

Cardiovascular
Colon and rectal
Dermatology
Gastroenterology
General surgery
Neurology
Obstetrics/Gynecology
Ophthalmology
Oral surgery
Orthopedic surgery
Otolaryngology
Pain management
Plastic surgery
Podiatry
Thoracic surgery
Urology
Vascular surgery

Example: Consumer has chosen Podiatry in Montgomery County. Consumer would then click on the specific facility to get information on that facility. (See next three pages for detailed ASF information that is being considered).

<a href="#"><u>Adam K. Spector, DPM, ASC</u></a>	Single Specialty
<a href="#"><u>Ambulatory Foot &amp; Ankle Center, Inc</u></a>	Single Specialty
<a href="#"><u>American Surgery Center, Inc</u></a>	Single Specialty
<a href="#"><u>Bethesda Ambulatory Surgical Center</u></a>	Single Specialty
<a href="#"><u>Burtonsville Surgical Center</u></a>	Single Specialty
<a href="#"><u>Drs. Taylor &amp; Osterman Ambulatory Surgical Center</u></a>	Single Specialty
<a href="#"><u>Four Corners Ambulatory Surgical Center</u></a>	Single Specialty
<a href="#"><u>Groman &amp; Rubin, DPM, PA, Ambulatory Surgical Center</u></a>	Single Specialty
<a href="#"><u>HealthSouth Montgomery Surgery Center</u></a>	Multi-Specialty
<a href="#"><u>Holy Cross Hospital</u></a>	Hospital-Based
.	
.	
.	
etc.	

## **PODIATRY (OUT-PATIENT)**

Name	Address/Phone Number	Tax Status/ Facility Type	Owner Name	Direct or Indirect Ownership Interest (Hospital/Health Care System/Insurer/Corporate Chain/Physician/Other)
XXXXXX	Silver Spring, MD	For-profit / Single specialty	XXXX, DPM	Physician
Accreditation and Date	Number of Physicians	Board-certified Anesthesiologist On-staff?	Number of Operating Rooms	
Accreditation Association of Podiatric Surgical Facilities (6/99)	0	Y/N	1	
		Available Anesthesiology Services?	Number of Procedure Rooms	
		Y/N	0	
Types of Insurance		Accepted		
Maryland Medicaid		No		
Medicaid (Other States)		No		
Medicare		Yes		
Medicare HMO		No		
Special Services				

## **PODIATRY (OUT-PATIENT)**

Name	Address/ Phone Number	Tax Status/ Facility Type	Owner Name	Direct or Indirect Ownership Interest (Hospital/Health Care System/Insurer/Corporate Chain/Physician/Other)
XXXXXX	Baltimore, MD	For-profit / Multispecialty	XXXXXX, RN	Hospital, Insurance Company, Corporate Chain, Physicians
Accreditation and Date		Number of Physicians	Board-certified Anesthesiologist On-staff?	Number of Operating Rooms
Joint Commission on the Accreditation of Health Care Organizations (5/99)		155	Y/N	5
			Available Anesthesiology Services?	Number of Procedure Rooms
			Y/N	1
Types of Insurance			Accepted	
Maryland Medicaid			Yes	
Medicaid (Other States)			No	
Medicare			Yes	
Medicare HMO			No	
Other Specialties Provided				
Colon & Rectal Surgery General Surgery Obstetrics/Gynecology Ophthalmology Oral Surgery			Orthopedic Surgery Otolaryngology Plastic Surgery Urology Pain Management	
Special Services				

## **GASTROENTEROLOGY (OUT-PATIENT)**

Name	Address/ Phone Number	Tax Status/ Facility Type	Owner Name	Direct or Indirect Ownership Interest (Hospital/Health Care System/Insurer/Corporate Chain/Physician/Other)
XXXXXXX	Laurel, MD	For-profit / Single Specialty	XXXX, M.D. Medical Director	Physician
Accreditation and Date	Medicaid Participant	Number of Physicians	Board-certified Anesthesiologist On-staff?	Number of Operating Rooms
Accreditation Association for Ambulatory Health Care (7/96)	Yes	4	Y/N	0
(Other)			Available Anesthesiology Services?	Number of Procedure Rooms
			Y/N	1
Types of Insurance		Accepted		
Maryland Medicaid		Yes		
Medicaid (Other States)		No		
Medicare		Yes		
Medicare HMO		Yes		
<b>Special Services</b>				

## **APPENDIX G**

### **Diagnosis Related Groups (DRGs) for Maryland and Pennsylvania**

### 15 Most Commonly Performed DRGs in Maryland Hospitals (1999)

DRG #	Name
373	Vaginal Delivery without Complicating Diagnoses
391	Normal Newborn
127	Heart Failure and Shock
430	Psychoses
089	Simple Pneumonia and Pleurisy, Age Greater than 17 with CC
390	Neonate with Other Significant Problems
143	Chest Pain
088	Chronic Obstructive Pulmonary Disease
014	Specific Cerebrovascular Disorders Except Transient Ischemic Attack
209	Major Joint and Limb Reattachment Procedures of Lower Extremity
116	Other Permanent Cardiac Pacemaker Implant or PTCA with Coronary Artery Stent Implant
371	Cesarean Section without CC
372	Vaginal Delivery with Complicating Diagnoses
182	Esophagitis, Gastroenteritis and Miscellaneous Digestive Disorders, Age Greater than 17 without CC
389	Full Term Neonate with Major Problems

### Pennsylvania's 15 Selected Diagnosis Related Groups (DRGs)

DRG #	Name (as listed in the Pennsylvania report)
127	Heart Failure and Shock
089	Simple Pneumonia and Pleurisy, Age Greater than 17 with CC
014	Specific Cerebrovascular Disorders Except Transient Ischemic Attack
122	Circulatory Disorders with Acute Myocardial Infarction without Major Complications, Discharged Alive
174	GI Hemorrhage with CC
416	Septicemia, Age Greater than 17
121	Circulatory Disorders with Acute Myocardial Infarction and Major Complications, Discharged Alive
148	Major Small and Large Bowel Procedures with CC
079	Respiratory Infections and Inflammations, Age Greater than 17 with CC
294	Diabetes, Age Greater than 35
316	Renal Failure
130	Peripheral Vascular Disorders with CC
210	Hip and Femur Procedures Except Major Joint Procedures, Age Greater than 17 with CC
082	Respiratory Neoplasms
110	Major Cardiovascular Procedures with CC
123	Circulatory Disorders with Acute Myocardial Infarction, Expired

## **Layman's Terminology for Specified DRGs**

Adult Pneumonia (DRG 89)  
Adult Lung Infections (DRG 79)  
Lung Cancer (DRG 82)  
Adult Diabetes (DRG 294)  
Kidney Failure (DRG 316)  
Adult Septicemia (DRG 416)  
Gastrointestinal Bleeding (DRG 174)  
Heart Attack (DRG's 121, 122, 123)  
Heart Failure and Shock (DRG 127)  
Major Vessel Operations except Heart (DRG 110)  
Vascular Operations except Heart (DRG 478)  
Vascular Disorders except Heart (DRG 130)  
Stroke (DRG 14)  
Major Intestinal Procedures (DRG 148)  
Hip Operations, except Replacements-Adults (DRG 210)

The Steering Committee will consider other DRGs to be included in the report, such as those for coronary artery bypass surgery (CABG), prostatectomy, mastectomy, and breast surgery.